

X04ACF – NAG Fortran Library Routine Document

Note. Before using this routine, please read the Users' Note for your implementation to check the interpretation of bold italicised terms and other implementation-dependent details.

1 Purpose

X04ACF opens a Fortran unit number for reading, writing or appending, and associates the unit with a named file.

2 Specification

```
SUBROUTINE X04ACF(IUNIT, FILE, MODE, IFAIL)
  INTEGER          IUNIT, MODE, IFAIL
  CHARACTER*(*)    FILE
```

3 Description

X04ACF is especially useful if the calling language is not Fortran. It opens a Fortran unit number for reading, writing or appending, and associates the unit with a filename specified by the parameter FILE.

Because it is not standard Fortran 77 to open a file for appending, this facility may not be available on all systems. See the Users' Note for your implementation for details.

4 References

None.

5 Parameters

- 1: IUNIT — INTEGER *Input*
On entry: the Fortran unit number which identifies the file to be read from, written to or appended to. Note that this may be system dependent. Values in the range 7 to 1000 should however be safe on most systems.
- 2: FILE — CHARACTER*(*) *Input*
On entry: the name of the file to be opened.
Constraint: must contain a valid filename for the computer system being used.
- 3: MODE — INTEGER *Input*
On entry: specifies whether the file is to be opened for reading, writing or appending as follows.
 - If MODE = 0, the file is to be opened for reading.
 - If MODE = 1, the file is to be opened for writing.
 - If MODE = 2, the file is to be opened for appending.*Constraint:* $0 \leq \text{MODE} \leq 2$.
- 4: IFAIL — INTEGER *Input/Output*
On entry: IFAIL must be set to 0, -1 or 1. For users not familiar with this parameter (described in Chapter P01) the recommended value is 0.
On exit: IFAIL = 0 unless the routine detects an error (see Section 6).

6 Error Indicators and Warnings

If on entry `IFAIL = 0` or `-1`, explanatory error messages are output on the current error message unit (as defined by `X04AAF`).

Errors or warnings specified by the routine:

`IFAIL = 1`

On entry, `MODE` is invalid.

`IFAIL = 2`

Failure to open the file for reading.

`IFAIL = 3`

Failure to open the file for writing.

`IFAIL = 4`

Failure to open the file for appending.

7 Accuracy

Not applicable.

8 Further Comments

None.

9 Example

This example program simply illustrates how to open a file for writing.

9.1 Program Text

Note. The listing of the example program presented below uses bold italicised terms to denote precision-dependent details. Please read the Users' Note for your implementation to check the interpretation of these terms. As explained in the Essential Introduction to this manual, the results produced may not be identical for all implementations.

```
*      X04ACF Example Program Text.
*      Mark 19 Release. NAG Copyright 1999.
*      .. Parameters ..
      INTEGER          NOUT
      PARAMETER       (NOUT=6)
      INTEGER          ICHAN
      PARAMETER       (ICHAN=4)
      CHARACTER*11     FNAME
      PARAMETER       (FNAME='success.res')
*      .. Local Scalars ..
      INTEGER          IFAIL
      LOGICAL          EX, OP
*      .. External Subroutines ..
      EXTERNAL        X04ACF
*      .. Executable Statements ..
      WRITE (NOUT,*) 'X04ACF Example Program Results'
*
*      Test successful open for write
*
      IFAIL = 1
```

```
*
  CALL X04ACF(ICHAN,FNAME,1,IFAIL)
*
  INQUIRE (ICHAN,EXIST=EX,OPENED=OP)
  IF ((IFAIL.EQ.0) .AND. EX .AND. OP) THEN
    WRITE (NOUT,99998)
    WRITE (ICHAN,99998)
  ELSE
    WRITE (NOUT,99999) FNAME, ICHAN
  END IF
*
  STOP
*
99999 FORMAT (' ** FAILS to open "',A,'" and connect file to channel ',
+           I2)
99998 FORMAT (' OK file successfully opened for writing')
END
```

9.2 Program Data

None.

9.3 Program Results

```
X04ACF Example Program Results
OK file successfully opened for writing
```
